UNITED STATES PATENT AND TRADEMARK OFFICE

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KAO, JUTAI

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 October 2008_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _9-16_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _9-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendments filed on 10/22/2008 have been considered in this office action. The amendments change the scopes of the original claimed invention. A new search is therefore conducted and new grounds of rejections are provided in this office action. The action is made FINAL, as necessitated by the amendments.

Claim objections and 35 USC 112 rejections made in previous actions have been overcome by the amendments and withdrawn in this office action.

Response to Arguments

1.   Applicant's arguments with respect to claims 9-11 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 12-16, although these claims were previously indicated to be allowable if re-written in independent form including all elements of the parent claim and overcoming the 35 USC 112 rejections, the amendments included new limitations while removing some critical elements of the original claim. Therefore, a new search is conducted on the claims and new grounds of rejections are provided.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4.   Claim 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain (US 2002/0181394) in view of Aalto (US 2003/0182430) and Basso (US 6,690,678).

Partain discloses a bandwidth broker for cellular radio access networks including the following features.

Regarding claim 9, a method for controlling the transmission of data between at least two stations over a transmission medium (see fig. 4), each station including data links for applications with assigned priorities and parameters identifying a quality of service (see block 202 in Fig. 4, wherein QoS is queried), said method comprising the steps of: establishing a new data link in a first station having an assigned priority (see Fig. 4, application prepares to setup the call step 201 and application

queries...with...QoS step 202); assigning the data link to a first application (see application completes...call setup step 204 in Fig. 4; or see "traffic channel is established" recited in paragraph [0060]); determining a function of the available free channel capacity of the transmission medium, determining the occupancy of the transmission medium by existing data links (see "notifies application whether link is congested or not" step 203 in Fig. 4); restricting the new data link according to the determined function and the assigned priority of the first application as compared to existing priorities (see application completes or aborts call setup step 204 in Fig. 4).

Regarding claim 10, wherein during the establishment of the new data link, the first station determines whether the measure of the available free channel capacity corresponds to a measure of the necessary channel capacity given by the parameter of the first application and based at least on the determination, establishing a link (see "...determine if bandwidth is available that satisfies the parameters requested by the MS" recited in paragraph [0060]), and if the result of the determination is negative the establishment of the data link is suspended, at least temporarily (see "If the bandwidth is not available, then the traffic channel establishment procedure ends" as shown in paragraph [0060]).

Partain does not explicitly disclose the following features: regarding claim 9, wherein the function of the occupancy of the transmission medium by existing links is determined (Partain only determines whether the link is congested); determining assigned priorities of the existing data links; and restricting the new data link based on determined occupancy, and the determined assigned priorities of the existing data link;

regarding claim 10, at least part of any data traffic which is assigned to applications with lower priority than the priority of the first application is considered; regarding claim 11, wherein the channel capacity is regarded as free up to the point where a threshold is reached, with this threshold corresponding to a relative fraction of the data traffic which is assigned to application with a lower priority.

Aalto discloses an adaptation of transmission capacity method including the following features.

Regarding claim 9, wherein the function of the occupancy of the transmission medium by existing links is determined (see "When a new connection is to be established…compares the transmission capacity needed for the connection with the …transmission capacity…If the transmission capacity available is sufficient…" recited in paragraph [0024]; where in the available transmission capacity is a function of the occupancy of the transmission medium by existing data links).

Basso discloses a method for dynamically adjusting the bandwidth of a continuous bit rate virtual path connection according to the network load including the following features.

Regarding claim 9, the method comprises the step of determining assigned priorities of the existing data links (see "maintain the agreed quality of service of existing connections" recited in column 10, lines 48-59); and restricting the new data link based on determined occupancy and the determined assigned priorities of the existing data links (see "…to make sure that there is always bandwidth available to accept the establishment of new voice connections…reduction of the bandwidth allocated to the

CBR VPC…" recited in column 14, lines 40-43; also see "progressed only when sufficient resources are available at each successive network element to establish the connection through the whole network based on its service category, traffic contract and quality of service, and in order to maintain the agreed quality of service of existing connection" recited in column 10, lines 48-59).

Regarding claim 10, at least part of any data traffic which is assigned to applications with lower priority than the priority of the first application is considered, in the context of the determination step, to be free channel capacity, (see "accept the establishment of new voice connection…reduction of the bandwidth allocated to the CBR VPC" recited in column 14, lines 40-43).

Regarding claim 11, wherein the channel capacity is regarded as free up to the point where a threshold is reached, with this threshold corresponding to a relative fraction of the data traffic which is assigned to application with a lower priority (see "accept the establishment of new voice connection…reduction of the bandwidth allocated to the CBR VPC" recited in column 14, lines 40-43; that is, bandwidth allocated to the CBR VPC, of the lower priority level, can be used for the connection of the new voice connection of the higher level, and is therefore considered free).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Partain using features, as taught by Aalto and Basso, in order to allow application of higher priority level to establish connections over those of lower priority level.

5.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Partain,

Aalto, Basso, Bernet (US 5,764,645) and Olnowich (US 5,404,537).

Partain discloses a bandwidth broker for cellular radio access networks including

the following features.

Regarding claim 12, a method for controlling the transmission of data between at

least two stations over a transmission medium (see fig. 4), each station including data

links for applications with assigned priorities and parameters identifying a quality of

service (see block 202 in Fig. 4, wherein QoS is queried), said method comprising the

steps of: establishing a new data link in a first station having an assigned priority (see

Fig. 4, application prepares to setup the call step 201 and application

queries...with...QoS step 202); assigning the data link to a first application (see

application completes...call setup step 204 in Fig. 4; or see "traffic channel is

established" recited in paragraph [0060]); determining a function of the available free

channel capacity of the transmission medium, determining the occupancy of the

transmission medium by existing data links (see "notifies application whether link is

congested or not" step 203 in Fig. 4); restricting the new data link according to the

determined function and the assigned priority of the first application as compared to

existing priorities (see application completes or aborts call setup step 204 in Fig. 4).

Partain does not explicitly disclose the following features: regarding claim 12,

wherein the function of the occupancy of the transmission medium by existing links is

determined (Partain only determines whether the link is congested); determining

assigned priorities of the existing data links; and restricting the new data link based on

determined occupancy, and the determined assigned priorities of the existing data link,

wherein a) during the establishment of a new data link by the first station, establishing

the data link without regard for the current utilization, b) communicating a message to

the first station if the transmission medium is occupied by data links assigned to an

application with a second priority corresponding to that of the first application by at least

one of the two stations which are maintaining data links assigned to the application with

the second priority via the transmission medium, and c) at least temporarily suspending

the new data link after receiving the message.

Aalto discloses an adaptation of transmission capacity method including the

following features.

Regarding claim 12, wherein the function of the occupancy of the transmission

medium by existing links is determined (see "When a new connection is to be

established...compares the transmission capacity needed for the connection with the

...transmission capacity...If the transmission capacity available is sufficient..." recited in

paragraph [0024]; where in the available transmission capacity is a function of the

occupancy of the transmission medium by existing data links).

Basso discloses a method for dynamically adjusting the bandwidth of a

continuous bit rate virtual path connection according to the network load including the

following features.

Regarding claim 12, the method comprises the step of determining assigned

priorities of the existing data links (see "maintain the agreed quality of service of existing

connections" recited in column 10, lines 48-59); and restricting the new data link based

on determined occupancy and the determined assigned priorities of the existing data

links (see "…to make sure that there is always bandwidth available to accept the

establishment of new voice connections…reduction of the bandwidth allocated to the

CBR VPC…" recited in column 14, lines 40-43; also see "progressed only when

sufficient resources are available at each successive network element to establish the

connection through the whole network based on its service category, traffic contract and

quality of service, and in order to maintain the agreed quality of service of existing

connection" recited in column 10, lines 48-59).

Bernet discloses an IP/ATM network adaptation scheme including the following

features.

Regarding claim 12, wherein a) during the establishment of a new data link by

the first station, establishing the data link without regard for the current utilization (see

"…connections can be set up at any time regardless of available bandwidth" recited in

column 1, line 65-66).

Olnowich discloses a priority interrupt switching apparatus including the following

features.

Regarding claim 12, b) communicating a message to the first station if the

transmission medium is occupied by data links assigned to an application with a second

priority corresponding to that of the first application by at least one of the two stations

which are maintaining data links assigned to the application with the second priority via

the transmission medium (see "the connection is being used or requested by a higher

priority device…" recited in column 15, lines 59-65), and c) at least temporarily

suspending the new data link after receiving the message (see "lower priority

connection can be temporarily paused..." recited in column 16, lines 12-24; that is,

when the new connection is of a lower priority and becomes broken, the link is

temporarily suspended).

It would have been obvious to one of the ordinary skill in the art at the time of the

invention to modify the system of Partain using features, as taught by Aalto, Basso,

Bernet and Olnowich in order to allow application of higher priority level to establish

connections over those of lower priority level.

6.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Partain,

Aalto, Basso, Bernet and Olnowich as applied to claim 12 above, and further in view of

Tsujimoto (US 2005/0117511).

Partain, Aalto, Basso, Bernet and Olnowich disclose the claimed limitations as

shown above.

Partain, Aalto, Basso, Bernet and Olnowich do not disclose the following

features: regarding claim 13, wherein setting a delay time based at least on the

establishing of the data link and after the delay time, repeating steps a) to c).

Tsujimoto discloses an interface device control method including the following

features.

Regarding claim 13, wherein setting a delay time based at least on the

establishing of the data link and after the delay time, repeating steps a) to c) (see "waits

a predetermined wait period...and again transmits the request packet" recited in

paragraph [0067], wherein as shown in the rejection to claim 12, the request packet is processed according to steps a-c).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Partain, Aalto, Basso, Bernet and Olnowich using features, as taught by Tsujimoto, in order to allow the congested transmission link to have time to process the existing traffic while still attempting to transmit using the newly requested connection.

7.   Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Partain, Aalto, Basso, Bernet, Olnowich and Tsujimoto as applied to claim 13 above, and further in view of Yusko (US 2004/0071133).

Partain, Aalto, Basso, Bernet, Olnowich and Tsujimoto disclose the claimed limitations as shown above.

Olnowich also discloses the following features.

Regarding claim 15, wherein the repetitions continue until either the establishment of a data link is permitted or the attempt to establish it is finally halted by a termination condition (see "remains pending until the higher priority user relinquishes the facility" recited in column 16, lines 12-24).

Partain, Aalto, Basso, Bernet, Olnowich and Tsujimoto do not disclose the following features: regarding claim 14, wherein after each repetition the delay time is increased by a discrete value.

Yusko discloses an intelligent PPPOE initialization process including the following features.

Regarding claim 14, wherein after each repetition the delay time is increased by a discrete value (see "the wait time...is doubled each iteration of the waiting period..." recited in paragraph [0012]).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Partain, Aalto, Basso, Bernet, Olnowich and Tsujimoto using features, as taught by Yusko, in order to provide enough time for the system to process the existing traffic.

8.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Partain, Aalto, Basso, Bernet, Olnowich, Tsujimoto and Yusko as applied to claim 14 above, and further in view of Purtell (US 6,950,947).

Partain, Aalto, Basso, Bernet, Olnowich, Tsujimoto and Yusko disclose the claimed limitations as shown above.

Partain, Aalto, Basso, Bernet, Olnowich, Tsujimoto and Yusko do not disclose the following features: regarding claim 16, wherein the duration of the suspensions before steps a) to c) are repeated can be prescribed as part of the message by the second station as a function of a second data link.

Purtell discloses a system for sharing network state to enhance network throughput including the following features.

Regarding claim 16, wherein the duration of the suspensions before steps a) to c) are repeated can be prescribed as part of the message by the second station as a function of a second data link (see "wait for a fixed period...substantially equal to the round trip time..." recited in column 8, lines 1-5, wherein it is known that the RTT must be estimated based on message returned by the second station).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Partain, Aalto, Basso, Bernet, Olnowich, Tsujimoto and Yusko using features, as taught by Purtell, in order to provide a reasonable initial wait period.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JUTAI KAO whose telephone number is (571)272-9719.

The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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